

From: [Philip Turner](#)
To: [Larry Koenig](#)
Cc: [andy.tirpak@tpwd.state.tx.us](#); [Barbara Nann](#); [Barry Forsythe](#); [Badraddin \(PHES\) Karachiwala](#); [Brad Lamb](#); [Brian Mueller](#); [Carlos Sanchez](#); [Charles Faultry](#); [Curry Jones](#); [Cynthia Fanning](#); [David Parrish](#); [david.parmar@glo.state.tx.us](#); [don.pitts@tpwd.state.tx.us](#); [Donald Williams](#); [Donn Walters](#); [Edward Bates](#); [Jeff Danielson](#); [jessica.white@noaa.gov](#); [Jim Herrington](#); [John Meyer](#); [Jon Rauscher](#); [John Wilder](#); [Linda Broach](#); [Marshall Cedilote](#); [Mark Fisher](#); [Robert Werner](#); [Rock \(CAO\) Owens](#); [Richard Seiler](#); [Sharon Parrish](#); [Snehal.Patel@cao.hctx.net](#); [Susannah Reilly](#); [Stephen Tzhone](#); [tammy_ash@fws.gov](#); [Tracie Phillips](#); [Walt Helmick](#); [william.schubert@tpwd.state.tx.us](#)
Subject: Re: San Jacinto RI: Fri 5/8: Call Cancelled
Date: 05/08/2009 09:45 AM

Excellent... Thanks Larry!!

Phil

▼ [Re: San Jacinto RI: Fri 5/8: Call Cancelled](#)

Re: San Jacinto RI: Fri 5/8: Call Cancelled

Larry Koenig to: Philip Turner

05/08/2009
09:37 AM

Cc: "Rock (CAO) Owens", Snehal.Patel, Edward Bates, Jeff Danielson, Cynthia Fanning, Charles Faultry, Barry Forsythe, Walt Helmick, Jim Herrington, Curry Jones, Brad Lamb, John Meyer, Brian Mueller, Barbara Nann, David Parrish, Sharon Parrish, Jon Rauscher, Carlos Sanchez, Stephen Tzhone, Donn Walters, Robert Werner, Donald Williams, tammy_ash, david.parmar, "Badraddin (PHES) Karachiwala", jessica.white, "John Wilder", "Linda Broach", "Marshall Cedilote", "Mark Fisher", "Richard Seiler", "Susannah Reilly", "Tracie Phillips", andy.tirpak, don.pitts, william.schubert

Some of this may be addressed in more detail in the TMDL data summary report that is on the FTP site. It is in the folder /TCEQ/TMDL Data and Appendices , most likely in text of the report document PDF.

I have also now uploaded the last QAPP (that was in effect during 2005 sampling) to the FTP site. It is in /TCEQ/dioxin TMDL QAPP WO7 annualupdate ver1a.pdf

That has a lot more info in it.

But as a quick summary:

Water was sampled using high-volume samplers. Each sample pumped at least 700 liters through a filter and a resin column (to assure detection limits could be achieved). Each sample required 6-8 hours to collect, because the pumps was limited to less than 1.6 L/min to avoid overwhelming the resin

columns, and there was down time as filters and columns were switched to keep pressures in range, overcome fouling, etc. The filters and columns were sent to the lab, where each was extracted and analyzed for mass of individual congeners. Mass results were divided by the pumped volume to get concentrations. Filter results represented "suspended solids" and resin column results represented "dissolved", and "total water" concentrations were the sum of dissolved and suspended solids results.

Sediment was sampled by Ekman dredge or similar equipment. Samples were from the top 10 inches or less of sediment, as is typical. Normal size samples (i.e. feasible for shipping to labs) were adequate for detection levels since sediment concentrations are much higher than in water. Each sample was a composite of several grabs taken around the boat anchored on position.

Tissue samples were collected by nets or lines or crab traps, edible filets/tissue were sent to labs. There were species and size criteria/goals. Details on handling are in QAPP and SOPs. We did catfish (gafftop, blue, or hardhead) and blue crabs. There was at least one analysis of stomach contents as well.

Some **sediment core samples** were collected by Tx A&M at a few places. They used a very direct and simple method, driving a PVC pipe into the sediment and then digging it up, which required divers at sites more than a couple of feet deep. Cores were sectioned and analyzed to various depths, at increments of about a centimeter I think.

There was also wastewater sampling (first sludge, then water from selected subset), storm runoff sampling at sites around the Houston area, and atmospheric deposition sampling. However, I am assuming you are not asking about those.

lk

>>> <Turner.Philip@epamail.epa.gov> 5/8/2009 8:02 AM >>>

Great Larry... Thanks!! Yeah, I'll be thinking about it. It has become one of my Friday rituals. Also, Larry, could you tell us what sampling techniques you guys used during TMDL investigations?

Thanks again!

Phil